Appl. No. 10/828,745 Amendment dated October 31, 2007 Reply to Office action of August 14, 2007

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

1-37. (canceled)

38. (new) A system for determining a GNSS-defined position of a single point on a structure, which system comprises:

a redundant array of multiple GNSS receivers;

multiple antennas each connected to a respective receiver and mounted in fixed relation relative to each other on said structure;

a common clock connected to said receivers:

an orientation device mounted on said structure and adapted for determining its orientation;

a position solution processor configured for computing a GNSS-defined position solution for said structure utilizing the output of said receivers in unison where: (1) GNSS signals received by said antennas are input to said position solution processor; (2) received signals are sampled at the same instant by operation of a common sample clock; and (3) the known relative orientation of said structure is input into the position solution processor; and

said position solution processor is adapted for computing the location of the single point on the structure.

39. (new) The system according to claim 38, which includes:

said orientation device comprising a GNSS receiver processing data from two or more of said antennas.

- 40. (new) The system according to claim 39, which includes:
  said GNSS receiver orientation device having a fixed orientation relative to said
  structure.
- 41. (new) The system according to claim 38 wherein said multiple receivers are incorporated into a single receiver unit.
  - 42. (new) The system according to claim 38, which includes:
    a plurality of switches each associated with a respective antenna; and
    said position solution processor being preprogrammed for operating said switches to
    select one or more of said antennas for providing signal input to a respective
    receiver substantially simultaneously.
- 43. (new) The system according to claim 38 wherein said orientation device comprises a compass.
  - 44. (new) The system according to claim 38, which includes: said receiver array including a master receiver and a slave receiver; said slave receiver including a temperature sensor; a thermocouple attached to said temperature sensor; and said slave receiver compensating for temperature drift.
- 45. (new) The system according to claim 38 wherein said structure comprises a marine vessel.

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46. (new) The system according to claim 38 wherein said structure is terrestrial.

47. (new) A system for determining a GNSS-defined position of a single point on a structure, which system comprises:

a redundant array of multiple GNSS receivers incorporated into a single receiver unit; multiple antennas each connected to a respective receiver and mounted in fixed relation relative to each other on said structure;

a common clock connected to said receivers:

an orientation device mounted on said structure and adapted for determining its orientation, said orientation device comprising a GNSS receiver processing data from two or more antennas;

a position solution processor configured for computing a GNSS-defined position solution for said structure utilizing the output of said receivers in unison where: (1) GNSS signals received by said antennas are input to said position solution processor; (2) received signals are sampled at the same instant by operation of a common sample clock; and (3) the known relative orientation of said structure is input into the position solution processor;

said position solution processor is adapted for computing the location of the single point on the structure;

a plurality of switches each associated with a respective antenna; and

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said position solution processor being preprogrammed for operating said switches to select one or more of said antennas for providing signal input to a respective receiver substantially simultaneously.